

ABSTRACT

A flow-controlled wind motor rotor has Disclosed in a wind rotor (1) comprising one or more blades (3) rotating around a vertical, central axis (4) within a main bearing (5), said blades being which are parallel to said a central vertical axis (4), said axis. The blades are being connected via crossbars (6), said blades being disposed freely rotatably in bearings (7), and said blades being orientable by means of a wind vane (9) to the direction of the wind.

The rotor is equipped with a wind vane for detecting of a wind direction and also with Said blades (3) comprise a symmetrical aerodynamic profile (8) over their entire cross section.

Said rotor comprises a primary control mechanism (11), which is controlled by said the wind vane (9) and aligns said profiles (8) of said blade(s) (3) along the wind direction (10) at each point of their trajectory (13) around the central vertical axis (4), said blades being disposed on said crossbars (6), and a secondary control mechanism (12), which aligns the longitudinal axes of said profiles (8) of said blade(s) (3) to the wind (10) at each point of their trajectory (13) around the central vertical axis (4) so as to produce an optimum aerodynamic force depending on the rotation angle of the crossbars (6) with respect to the wind vane (9) and the rotation velocity of the crossbars (6). mechanism, which is subordinate to the first control mechanism. The primary control mechanism is driven by a V-belt, while the secondary control mechanism is driven by a stepping engine with a worm gear.